

Maths-Whizz Programme Report 2022/2023

Funded by:









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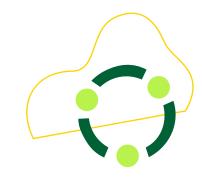
Niamh Mc Namara

Maths-Whizz Programme Report

Introduction

The aim of this report is to highlight the impact of our Maths-Whizz 2022/2023 programme.

Kinia's aim is to support children from disadvantaged settings to realise their rights and achieve their full potential through education. In the Irish context, its interventions have focused on the development of core literacy and numeracy skills targeting those at high risk of school failure - struggling learners in designated disadvantaged DEIS schools. At Kinia, through providing funded Maths-Whizz licences to schools, our Maths-Whizz programme currently supports 1,300 students and aims to reach nearly 4,000 over the course of the next three years. Over the course of the project there has been regular contact with stakeholders and funders.



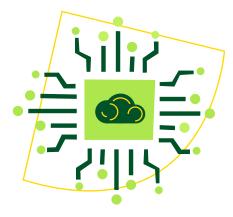
Whizz Education's Education Success Partner is in touch weekly with the data for our schools and we have meetings on a termly basis. Interim and outcome reports have been prepared and shared with the relevant stakeholders.





Maths-Whizz Programme Overview

Maths-Whizz is an AI enabled virtual maths tutor. The tutor develops a unique personalised learning journey for all students. Through engaging lessons and continuous assessment, the tutor tracks students' progress, maintaining an up-to-date understanding of their needs and providing the appropriate support at all times.





Maths-Whizz Outcomes

The Maths-Whizz programme aims to help teachers identify students' learning gaps through an initial assessment, accelerate students' learning with regular usage and overall increase children's confidence in Maths.

By providing access to this programme to schools and teachers we hope to achieve the following:

- Help schools achieve their goals and objectives for Mathematics
- 2 Improve students' opinion of and confidence in Maths
- 3 Improve students' Maths performance and their outlook
- Provide access for 1,300 students in 2023

Feedback received from educators involved in our project and the high number of requests to participate for another academic year supports these objectives.

"My students have a more positive outlook on Maths due to their engagement with Maths Whizz"

Class teacher, St Patrick's BNS, June 2023 "It allowed me to help children move on to more individual challenging work while it also helped reinforce work for those who need support"

Teaching principal, St Paul's N.S, June 2023

Expectations for Organisations using Maths-Whizz

Kinia receives a lot of interest from schools and teachers, often with requests for more licences than we can provide. To ensure the free licences we provide are used to their full potential Kinia has set out some expectations for participants.

The main expectations that organisations are made aware of and agree to when receiving licences:

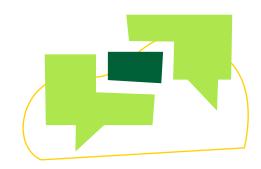
Students have a minimum of 30 minutes of Maths-Whizz usage per week.

Students aim to achieve 3 progressions weekly.

As Maths-Whizz creates a learning journey specific to each student taking part, higher usage of the programme will link to more progressions made in the curriculum.



Supporting those taking part



Kinia supports the schools throughout the year in a variety of ways to ensure they achieve the outcomes previously mentioned. A dedicated education officer and project lead, along with Whizz-Ed support, assisted with the initial creation of school, teacher and pupil profiles on the platform in September. This involves uploading student details, creating usernames, creating passwords and sharing these with the relevant teachers.

Initial online training sessions were provided to any teachers or schools new to the programme. To ensure high levels of usage and making the most of the free licences, attendance was encouraged. The expectations regarding usage were also highlighted in these sessions. All teachers using the programme were emailed every fortnight with progress updates for their students. They were updated on their overall students' usage and progressions. Low usage or progressions was highlighted and excellent usage/ progressions were congratulated where relevant. Advice was offered in these email updates too regarding improving students progressions if required.

Effective use of Maths-Whizz will require a good internet connection and suitable devices for students to access the platform in class. Nine schools have been supported with the provision of tablets to enable students to access Maths-Whizz and reach the expected usage. Teachers have been very positive of this support stating they would not be able to roll-out the programme effectively in their school without these devices.

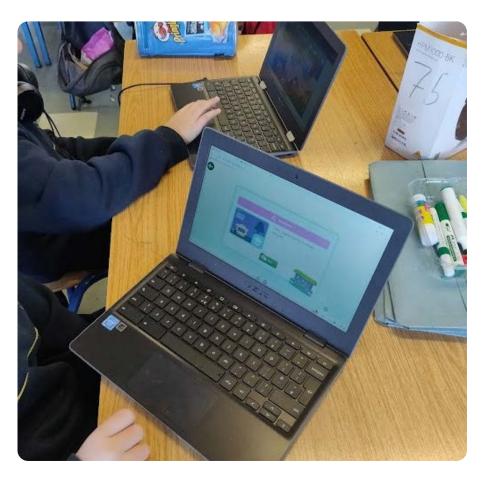
After a few months of schools using Maths-Whizz, inperson class visits were offered to Dublin schools as an opportunity to see Maths-Whizz in action and to recap the features of the platform for students.Kinia visited 6 classes in 3 schools giving demonstrations of the platform to new students and highlighting the features available to teachers in their own accounts. The visits were successful and had a positive impact on usage in those schools.

"Without the tablets loaned to our school, we could not have managed to use Maths-Whizz half as much. Thank you. We have a shared laptop trolley which is not always available to us."

Class teacher, Scoil Mhuire Senior Blakestown, June 23

Participants of the programme were also aware that Kinia was available for ongoing support throughout the academic year. Other support provided involved adding new students to classes, removing students who had left the school and answering any questions teachers may have had. "Niamh demonstrated Maths Whizz programme to the boys which proved invaluable."

Class teacher, St Patrick's BNS Ringsend



Data & Impact 2022/2023

Number of schools: 28 Schools & 1 Youth Centre (see Appendix for school details).

Number of students engaged: 1,363.

Pupils have received 15,651 hours of personalised maths tutoring since September, passing 114,408 lessons in total.

Average weekly usage: 23 minutes.

93% of students achieving recommended usage made accelerated progress on their maths-age.

There is a positive correlation between the time students spend using the tutor and the progress they make in their initial maths-age

Students who passed two or more lessons on the virtual tutor each week, have made three times the progress in Maths-Age compared to those who passed less than two lessons

	STUDENTS WITH <2 LESSONS PASSED PER WEEK	STUDENTS WITH >2 LESSONS PASSED PER WEEK
AVERAGE MATHS- AGE SEPTEMBER 2022	8.85	8.37
AVERAGE MATHS- AGE JUNE 2023	9.09	9.18
IMPROVEMENT (WEEKS)	12	41

 Table 1: Comparison of Maths-Age from September - June

The gap between chronological age and maths-age is referred to as the delta. A positive delta means students are working above their expected level and a negative delta means they are working below their expected level for their age. A delta of 0 means a student is working at their expected level. The overall delta narrowed over the last academic year

MONTH	NUMBER OF SCHOOLS	AVERAGE DELTA	
SEPTEMBER	16	-1.32	
JUNE	29	-1.25	

Table 2: Comparison of all students' Maths-Age delta

For students passing two or more lessons per week, the gap between chronological age and maths-age decreased. For students passing less than two lessons per week, the gap between chronological age and maths-age increased.

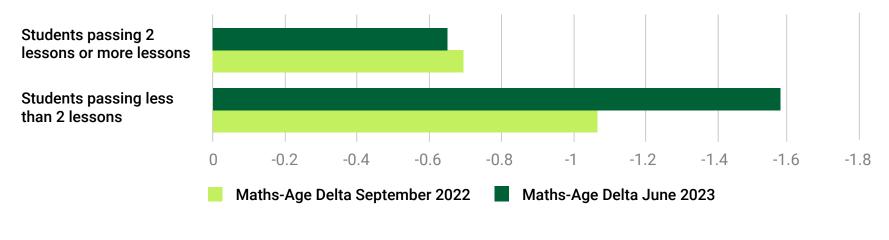


Table 3: Comparison of Maths-Age delta between students passing more than and less than 2 lessons a week.

Challenges

As we provide the licences to school at no cost it is important they are used to their full potential and the Maths-Whizz objectives are achieved. Ensuring educators provide the suggested minimum usage time of 30 minutes a week for their students to use the platform and make progressions can be a challenge. To alleviate the risk of low/no usage, the expectations are set out clearly to schools when they apply for licences and they commit to the minimum usage time when completing the form. A record is kept of the usage levels for individual schools each week. Protocols have been outlined if there is consistent low usage. This includes regular communication and updates, offering assistance if necessary and potentially reassigning the licences to other students.

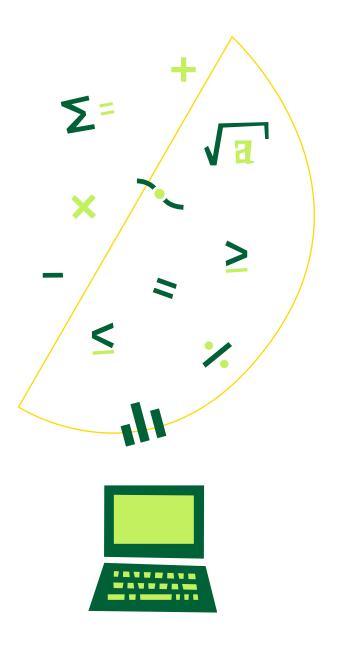


A good internet connection and suitable devices for students are required for participants to successfully achieve the objectives. Some classrooms have a device for every child or they share devices with other classes on a timetable, this is suitable if they can use these devices on a weekly basis to achieve the recommended usage. The nature of the school environment means this may not always be the case for every school and can be a challenge for the programme. Some teachers reported having events during their timetabled device time, internet issues or a lack of devices as a reason for not achieving the recommended usage for a specific week. In cases where this may be a recurring issue we can offer additional devices (laptops/tablets) or WiFi hubs.

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There is an overwhelming amount of requests from existing schools to participate in the project for another year which is very positive. Often principals and teachers get in contact to participate in the project as they have heard about it from friends or colleagues. Recruiting new schools for the project who may not have heard of Maths-Whizz before can be a challenge as some may initially view it as an additional task rather than as a helpful tool. We aim to provide education to these teachers to show how it can be a positive support to their teaching rather than additional work.





Participant Feedback

All schools and teachers were sent a feedback form at the end of the school year to seek an understanding of the impact the project had for them. 30 educators from 20 schools completed the form and provided feedback. The following are results of the survey along with quotes from the respondents explaining their answers:



87% of respondents agreed that Maths-Whizz has helped their class/school to achieve their goals in mathematics education.

"The girls became more comfortable with using mathematical language as well as developing their confidence in place value and addition especially."

"Links in very well with the curriculum & a great resource." "Maths Whizz reinforced curricular areas studied in class" 93% agreed that using Maths-Whizz makes learning Maths skills a more fun and engaging experience for their students.

"Maths-Whizz added fun to the maths lessons. The higher achievers liked the idea of competing against each other and the more reluctant maths students could see their progress using the bar charts as a visual aid. "

"The kids loved Maths-Whizz time, it improved their outlook on maths as they saw it as fun." "The children in my room were very engaged and enjoy the leaderboard etcit motivates their performance" When asked to rate (from 1 to 5) the extent Maths-Whizz helped increase students' confidence in Maths, 73% selected a 4 or more.

"The more practice they had with a topic the more confident they felt, it was great when they got a jump ahead in a topic as they felt so accomplished."

> "As it's focused on individual abilities it supports each child and develops their confidence"

"It has consolidated maths topics and introduces new topics in a fun way."



When asked to rate (from 1 to 5) the extent Maths-Whizz helped with teaching, 80% selected a 4 or more.

Participants were asked to give details of the impact being involved with the project had on their teaching and learning.

"It made managing a multi grade 3rd to 6th Class so much easier; half the class were using Maths-Whizz while I taught the other half and then vice versa"

"I love how I can check each individual time and progressions. If they are not making progressions I can look into it with them" "It enabled me to get a true insight into the areas of difficulty for each child and gave me a vantage point to start my teaching from." 100% of the respondents answered yes, they would want to continue using Maths-Whizz if it was available for the next academic year.

"Maths Whizz has been top of the list of my classes" favourite memory in 2nd class which just shows how much they all really enjoyed the Maths Whizz Experience"

"I have seen the benefit first hand with students in my class this year and I hope other students will be able to avail of this opportunity going forward."

"I would love to be able to continue to use Maths Whizz next year with the senior classes as it is a huge benefit to them."

"It gave me an insight into areas of the Maths curriculum where pupils were struggling informing my planning and assessment"

Looking forward: September 2023



The process of recruiting schools for the 2023/24 academic year has already begun. Included in the end of year feedback form was an option to apply for licences for another year. The 20 schools who completed the form have all applied for licences for September. 4 new schools have also applied for licences for September at this stage with the total licences requested reaching over 1,000 already. Recruitment of new and additional schools to the programme will continue through to September and beyond.

The finalised schools will be contacted in the last week of August/ beginning of September to confirm the students and teachers details of who will be participating in the project. Schools will be reminded of the expectations of the project and required to confirm their understanding of the protocols in place in case of low usage. Online training and in-person school visits (where requested) will take place at the beginning of the academic year to ensure effective use of the platform this will be encouraged for both new and returning schools as the platform has been updated recently. Training materials will be compiled and updated over the summer holidays to ensure they are ready to be shared with educators as soon as they return to school.

A further 60 laptops have been purchased to support schools in the next academic year and 2 schools have already been identified as requiring some of these devices. Schools who already have Kinia devices who are participating in the project again will have these available to them again to support them in September.

Conclusion

The Maths-Whizz project has seen another year of positive outcomes. Communication and meetings with Whizz Education throughout the academic year have been hugely positive, particularly regarding the overall usage and progressions seeing some of the highest numbers of the project so far. The data provided from the platform has highlighted the benefits regular use of Maths-Whizz has for students' mathematical ability. Potential challenges to the project have been identified with plans and protocols being put in place to alleviate these from happening. The results of the survey and feedback from participants mentioned above demonstrate the positive impact Kinia's project has had on teaching and learning in the schools we worked with this year.





Appendix

SCHOOL NAME	LOCATION	DEIS	TEACHERS	STUDENTS ENGAGED
Ennis Educate Together	Clare	\checkmark	1	14
Glebe NS	Donegal		2	55
Knockmahon NS	Waterford	\checkmark	2	12
Lettergesh NS	Galway	✓	2	17
Mary Queen of Angels 2	Dublin	✓	3	55
Mount Sion Primary School	Waterford	✓	9	179
North Dublin Muslim NS	Dublin		7	50
Our Lady Immaculate SNS	Dublin	✓	2	33
Our Lady of Consolation	Dublin	✓	2	52
Our Lady of the Wayside	Dublin	\checkmark	2	32
Our Lady's NS	Dublin	✓	1	24
Scoil Maria Assumpta	Cork	✓	2	14
Scoil Mhuire Ogh Loreto	Dublin	✓	7	101

SCHOOL NAME	LOCATION	DEIS	TEACHERS	STUDENTS ENGAGED
Scoil Padre Pio	Cork	\checkmark	5	40
St Aidan's SNS	Dublin	\checkmark	3	65
St Brigid's Kells	Kilkenny		2	19
St Christopher's Primary School	Dublin	\checkmark	3	55
St Mary's Garristown	Dublin		4	39
St Mary's Dorset Street	Dublin	\checkmark	1	24
St Patrick's BNS	Dublin	\checkmark	6	99
St Patrick's, Ughtyneill	Meath		2	27
St Paul's Boys NS	Roscommon	\checkmark	3	60
St Paul's Primary Brunner	Dublin	\checkmark	3	55
St Vincent's Convent NS	Cork	\checkmark	4	64
Stanhope Street Primary	Dublin	\checkmark	2	37
Straffan NS	Kildare		2	49
The Aisling Project	Dublin		1	29
Whitecross NS	Meath		1	6

Definitions

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Usage: The amount of time a student spends on Maths-Whizz in a given week. To reach the desired outcomes Whizz Education recommends a minimum of 30 minutes per week on the tutor.

Progressions: Maths-Whizz is divided into exercises and assessments. Students will complete an exercise which teaches them a specific topic or technique in a gamified manner. Once completed (whether successfully or not) students will be assessed on the topic in a less gamified structure. If they pass the assessment they achieve 1 progression.







